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# Competition Law and Behavioral Discrimination: Regulatory Pitfalls and New Opportunities

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## I. INTRODUCTION

“Knowing” customers is critical to the world of e-commerce. Big data analytics gives companies the ability to accurately predict the needs of their customers. This knowledge is used by different businesses to offer personalized services.<sup>1</sup>

Big data analytics refers to the ability of businesses “to gather large volumes of data, often from multiple sources, and use it to produce new kinds of observations, measurements, and predictions about

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1. See Ariel Ezrachi & Maurice E. Stucke, *The Rise of Behavioral Discrimination*, 37 EUR. COMPETITION L. REV. 485, 485 (2016).

individual customers.”<sup>2</sup> Through big data analytics, companies can detect changes in consumer preferences, identify biases, and, correspondingly, adjust their business strategies to account for these changes,<sup>3</sup> such as by setting personalized prices—the most common type of behavioral discrimination.<sup>4</sup>

Behavioral discrimination refers to sellers’ ability to use “big data and digital technology to explore consumer demand, to steer consumers towards particular products, to create targeted advertising and marketing offers, and in a more limited and experimental fashion, to set personalized prices.”<sup>5</sup> Therefore, buyers may see different prices for similar products (personalized pricing) or receive different services at the same price (personalized services). Additionally, buyers may be subjected to targeted advertisements, micro-targeting, and other forms of manipulation.

Data-driven behavioral discrimination is notable in several industries.<sup>6</sup> For example, the Wall Street Journal has reported that Amazon, Staples, and Home Depot personalize prices according to “different consumer characteristics.”<sup>7</sup> While big data analytics benefit consumers and suppliers in several distinct ways, behavioral discrimination raises multiple concerns including exploitation, social

2. EXEC. OFF. OF THE PRESIDENT OF THE U.S., BIG DATA AND DIFFERENTIAL PRICING 3 (2015) [hereinafter PRESIDENT’S OFFICE], [https://obamawhitehouse.archives.gov/sites/default/files/whitehouse\\_files/docs/Big\\_Data\\_Report\\_Nonembargo\\_v2.pdf](https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/docs/Big_Data_Report_Nonembargo_v2.pdf).

3. See MAURICE E. STUCKE & ALLEN P. GRUNES, BIG DATA AND COMPETITION 36–42 (2016).

4. See *Personalised Pricing in the Digital Era – Note by the European Union*, ORG. FOR ECON. COOP. & DEV. 3 (Nov. 23, 2018) [hereinafter *Note by the European Union*], [https://one.oecd.org/document/DAF/COMP/WD\(2018\)128/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2018)128/en/pdf).

5. PRESIDENT’S OFFICE, *supra* note 2, at 19.

6. This includes the online employment marketplace (e.g., ZipRecruiter), the coupon marketplace (e.g., Coupons.com), the airline industry (e.g., AirAsia), and the ground transportation sector (e.g., Uber). See *Personalised Pricing in the Digital Era – Background Note by the Secretariat*, ORG. FOR ECON. COOP. & DEV. 16–17 (Nov. 28, 2018) [hereinafter *Background Note by the Secretariat*], [https://one.oecd.org/document/DAF/COMP\(2018\)13/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)13/en/pdf).

7. *Id.* at 14 (citing Jennifer Valentino-DeVries, Jeremy Singer-Vine & Ashkan Soltani, *Websites Vary Prices, Deals Based on Users’ Information*, WALL ST. J. (Dec. 24, 2012), <https://www.wsj.com/articles/SB10001424127887323777204578189391813881534>).

inequality,<sup>8</sup> and unnecessary emotional purchasing.<sup>9</sup> Most significantly, behavioral discrimination may distort market competition. Scholars assume that competition law should deal with this, but such behavioral discrimination's effects on market competition have not been adequately explored.

This Article focuses on anticompetitive concerns associated with behavioral discrimination. Specifically, the Article considers whether regulatory tools can respond to various challenges posed by behavioral discrimination.

To answer this question, this Article explores the following issues: First, should behavioral discrimination be condemned (i.e., is there a problem in need of a solution)? Second, if so, is government intervention warranted in the circumstances? Third, if government intervention is necessary, can competition law regulate behavioral discrimination? Fourth, if competition law is ineffective, should governments introduce new legislative instruments? Finally, if so, what are feasible regulatory approaches to behavioral discrimination?

The Article proceeds as follows: Part I explores the concept of behavioral discrimination and its types. Part II outlines economic harms and benefits associated with behavioral discrimination. Part III explores competition law mechanisms that may apply to behavioral discrimination. The following competition law jurisdictions are considered: the European Union (EU), the United States (US), Japan, and Singapore. Part IV explores policy implications in applying existing competition law mechanisms to behavioral discrimination based on the findings in Part III. Ultimately, this Article offers a proposal to address various drawbacks associated with contemporary regulatory mechanisms. To do so, this Article explores the four leading jurisdictions' competition law and shows all are insufficient to address the behavioral discrimination problem.

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8. See EXEC. OFF. OF THE PRESIDENT OF THE U.S., *BIG DATA: SEIZING OPPORTUNITIES, PRESERVING VALUES* 53 (2014), [https://obamawhitehouse.archives.gov/sites/default/files/docs/big\\_data\\_privacy\\_report\\_may\\_1\\_2014.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf).

9. See Joseph Jerome, *Big Data: Catalyst for a Privacy Conversation*, 48 IND. L. REV. 213, 218–19 (2014); ARIEL EZRACHI & MAURICE E. STUCKE, *VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM-DRIVEN ECONOMY* 105 (2016).

## II. BEHAVIORAL DISCRIMINATION: HOW BIG ANALYTICS ARE USED TO INFLUENCE CONSUMERS

As noted earlier, behavioral discrimination refers to a range of discriminatory practices where companies harvest customers' "personal data to identify which emotion (or bias) will prompt [customers] to buy a product and what is the most [customers] are willing to pay."<sup>10</sup> More broadly, behavioral discrimination includes discriminatory practices employed by businesses to shape the demand for particular products.<sup>11</sup>

Since this topic is not widely explored in the academic literature, it is essential to provide an overview of behavioral discrimination. Following this overview, the Article considers the legality of behavioral discrimination under different regulatory frameworks.

### A. *Big Data Analytics and Behavioral Discrimination*

Behavioral discrimination refers to a commercial practice whereby a company harvests and analyses the data specific to individuals or groups.<sup>12</sup> The guidance derived from the data (data insights) is used in the development of personalized offers.<sup>13</sup> Ultimately, data analysis allows companies to target and exploit buyers' biases,<sup>14</sup> stimulate overall consumption, and increase profits.<sup>15</sup> Data insights also allow sellers to estimate buyers' reservation prices.<sup>16</sup> In summary, the analysis of various behavioral patterns helps sellers to develop enticing offers for buyers based on their preferences.

Behavioral discrimination is implemented through three steps: (1) collection of personal information, (2) prediction of buyers' preferences and reservation prices, and categorization of buyers based on

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10. EZRACHI & STUCKE, *supra* note 9, at 101.

11. *Id.* at 105.

12. *Id.* at 101.

13. *Id.*

14. See STIGLER COMM. ON DIGIT. PLATFORMS, FINAL REPORT 7–8 (2019), <https://www.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf>.

15. EZRACHI & STUCKE, *supra* note 9, at 101.

16. *Id.*

shared characteristics, and (3) delivery of personalized offers. To illustrate various ways in which this system is utilized by businesses, this Article briefly considers practices of three major digital platforms: Google, Facebook, and Uber.

### 1. Google—Harvesting, Analytics, and Targeting

Google, the world's largest web search company, collects its users' online and offline data through various connected devices. Initially, the company's data harvesting activities were limited to online activities of users, including web searches, websites visited, and the specific content browsed.<sup>17</sup> The growth of various devices such as laptops, smartphones, tablets, and Google's own hardware and software products, have created multiple channels for the company to collect personal information.

Once the data is collected, Google creates consumer profiles and divides its consumers into categories.<sup>18</sup> Taking advantage of consumers' bounded rationality and cognitive bias, Google facilitates online shopping sessions and increases demand for its advertisers' products. For example, Google allows advertisers to target its specific groups of users.<sup>19</sup> Other examples of behavioral discrimination include audience targeting, content targeting, and/or device targeting.<sup>20</sup>

### 2. Facebook—Sophisticated Targeting Capabilities

Big data technologies are so powerful that they allow companies, like Facebook, to “target users . . . in vulnerable emotional

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17. See Press Release, Fed. Trade Comm., FTC Staff Proposes Online Behavioral Advertising Privacy Principles (Dec. 20, 2007), <https://www.ftc.gov/news-events/press-releases/2007/12/ftc-staff-proposes-online-behavioral-advertising-privacy>.

18. See COMPETITION & MKTS. AUTH., ALGORITHMS: HOW THEY CAN REDUCE COMPETITION AND HARM CONSUMERS 4 (2021), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/954331/Algorithms\\_++.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/954331/Algorithms_++.pdf).

19. See *Targeting Your Ads*, GOOGLE, <https://support.google.com/google-ads/answer/1704368?hl=en-GB> (last visited Aug. 31, 2022).

20. *Id.*

states.”<sup>21</sup> One report claims that Facebook exploited young Australians by allowing “advertisers to target them at their most vulnerable” state.<sup>22</sup> Empirical research also shows that emotional expressions of users significantly affect others on Facebook through emotional contagion<sup>23</sup>—Facebook’s users express their emotions through posts and stories, and this content is visible by others via Facebook’s “News Feed.”<sup>24</sup> Reading a News Feed containing negative or positive messages in relation to a particular subject influences the feelings of others towards that subject.<sup>25</sup>

With big data analytics, companies like Facebook can detect and monetize different emotional states of users by “monitoring posts, pictures, interactions and internet activity in real-time.”<sup>26</sup> For example, Facebook sends an increasing volume of watch advertisements to its users who search Omega Watches’ Facebook front page.<sup>27</sup> While Facebook denies targeting emotionally vulnerable users, the ethical issues that emerge from the company’s capacity to do so has attracted scholarly attention.<sup>28</sup>

21. See Natasha Lomas, *Facebook Denies It Sells Ad-Targeting Based on Users’ Emotions*, TECHCRUNCH (May 2, 2017, 10:50 AM), <https://techcrunch.com/2017/05/02/facebook-denies-it-sells-ad-targeting-based-on-users-emotions/>.

22. See *Facebook Targets “Insecure” Kids*, AUSTRALIAN (May 1, 2017), [https://www.theaustralian.com.au/subscribe/news/1/?source=Code=TAWEB\\_WRE170\\_a&dest=http%3A%2F%2Fwww.theaustralian.com.au%2Fbusiness%2Fmedia%2Fdigital%2Ffacebook-targets-insecure-young-people-to-sell-ads%2Fnews-story%2Fa89949ad016eee7d7a61c3c30c909fa6&memtype=anonymous&mode=premium.&v21suffix=414-b](https://www.theaustralian.com.au/subscribe/news/1/?source=Code=TAWEB_WRE170_a&dest=http%3A%2F%2Fwww.theaustralian.com.au%2Fbusiness%2Fmedia%2Fdigital%2Ffacebook-targets-insecure-young-people-to-sell-ads%2Fnews-story%2Fa89949ad016eee7d7a61c3c30c909fa6&memtype=anonymous&mode=premium.&v21suffix=414-b).

23. See Adam D. I. Kramer, Jamie E. Guillory & Jeffrey T. Hancock, *Experimental Evidence of Massive-Scale Emotional Contagion Through Social Networks*, PROC. OF THE NAT’L ACAD. OF SCIS. OF THE U.S. 1 (2014), <https://www.pnas.org/doi/epdf/10.1073/pnas.1320040111>.

24. *Id.*

25. *Id.* at 2.

26. *Id.*

27. See Omega, *OMEGA Watches*, FACEBOOK, <https://www.facebook.com/omega/> (last visited Sept. 1, 2022).

28. See e.g., Patrick Kulp, *Ads Will Target Your Emotions and There’s Nothing You Can Do About It*, MASHABLE (May 2, 2017), <https://mashable.com/2017/05/02/facebook-ad-targeting-by-mood/?europa=true>.

### 3. Uber—Harvesting, Analytics, and Personalized Pricing

Uber actively employs behavioral discrimination in its operations. One study has shown that Uber adopts a segmentation-targeting-positioning strategy to target different groups of customers.<sup>29</sup> Uber harvests customers' information and divides them into groups according to geographic, demographic, behavioral, and psychographic information. The company targets each group<sup>30</sup> by providing different levels of service and price points.<sup>31</sup> The company is enlarging its user base through this cutting-edge segmentation power.

#### *B. Types of Behavioral Discrimination*

Behavioral discrimination comes in several forms. The following examples illustrate various approaches used by online sellers to manipulate buyers through behavioral discrimination. Exploring these approaches is a good start to understanding how strong digital platforms can influence market competition by manipulating buyers and why competition law should prevent such practices.

##### 1. Decoys

Decoys refer to the strategy of triggering buyers' desire to purchase specific products by showing different product options with different prices.<sup>32</sup> This technique is particularly effective in the context of online retail platforms because, through big data analytics, companies can “experiment in personalising the use of decoy products to nudge different groups of consumers to purchase higher-margin products.”<sup>33</sup>

When selecting products, buyers typically select the cheapest option and disregard its market price. This behavior is targeted by

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29. John Dudovskiy, *Uber Segmentation, Targeting and Positioning*, BUS. RSCH. METHODOLOGY (July 20, 2021), <https://research-methodology.net/uber-segmentation-targeting-and-positioning/>.

30. *Id.*

31. *Id.*

32. EZRACHI & STUCKE, *supra* note 9, at 486–87.

33. *Id.* at 487.

online sellers. For example, the European Commission (EC) conducted a sector investigation and found that more than sixty-one percent of e-commerce websites personalize rankings, i.e., use decoys to influence shopping decisions.<sup>34</sup>

It is important, however, to distinguish decoys from misleading practices. The former manipulates consumers' desires and willingness to pay. Misleading practices, by contrast, are carried out by providing inaccurate or misleading information to customers. For example, telecommunications companies could provide a regular plan at \$50 per month and a "limited time" plan at \$30 per month if consumers also register for the company's TV plan. All information provided is accurate, but the special offer might lead consumers to purchase an additional plan that they do not need.

## 2. Personalized Pricing

Personalized pricing occurs when companies offer different price options to specific individuals based on the review of their personal information.<sup>35</sup> For example, companies may display lower-quality and cheaper items to price-sensitive consumers. Alternatively, quality sensitive clients would be shown more expensive items.<sup>36</sup> In the end, both types of consumers end up spending more money on various products as both offers satisfy their personal preferences.<sup>37</sup>

Notably, this strategy works well in a market where most consumers are reluctant or unable to search for alternatives, or in situations where search costs are comparatively high (e.g., price information is highly untransparent).<sup>38</sup>

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34. See *Consumer Market Study on Online Market Segmentation Through Personalised Pricing/Offers in the European Union*, EUR. COMM'N (July 19, 2018), [https://ec.europa.eu/info/publications/consumer-market-study-online-market-segmentation-through-personalised-pricing-offers-european-union\\_en](https://ec.europa.eu/info/publications/consumer-market-study-online-market-segmentation-through-personalised-pricing-offers-european-union_en).

35. EZRACHI & STUCKE, *supra* note 9, at 487; see also PRESIDENT'S OFFICE, *supra* note 2, at 11.

36. EZRACHI & STUCKE, *supra* note 9, at 487.

37. *Id.*

38. *Id.* at 489.

### 3. Increasing Complexity

A complex shopping environment can facilitate discriminatory practices. Generally, consumers appreciate the ability to compare different shopping options so that they can select items with the most benefits. But having too many choices is not always beneficial to consumers.<sup>39</sup> Too many choices confuse consumers and jeopardize their ability to make informed decisions because they are unable to fully digest the necessary information.<sup>40</sup> Knowing this limitation, sellers can exploit consumers by intentionally offering many unnecessary options. A worn-out consumer is, then, “assisted” by the seller through various product filters. However, the items are removed in a manner that benefits the sellers.<sup>41</sup>

Product evaluation and comparison are essential to informed purchasing decisions. Big data analysis allows companies to provide personalized product recommendations and offers. This practice complicates product evaluation and comparison. The overabundance of information increases the likelihood that consumers will opt for the default products showcased by the business. This, in turn, can stymie rational purchasing decisions.

### 4. Imperfect Willpower and Behavioral Biases

It is well established that consumers’ willpower is imperfect—their biases and heuristics influence decision-making.<sup>42</sup> At times, this can be used by sellers to manipulate buyers into making particular purchases. Imperfect willpower is exploited when sellers offer a product with a gradually declining price.<sup>43</sup> Less patient buyers may buy the

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39. See MAURICE E. STUCKE & ARIEL EZRACHI, COMPETITION OVERDOSE: HOW FREE MARKET MYTHOLOGY TRANSFORMED US FROM CITIZEN KINGS TO MARKET SERVANTS 94–95 (2020).

40. *Id.* at 97–101.

41. *Id.* at 105–06.

42. See Maurice E. Stucke, *Foreward: The Rise of Behavioral Law and Economics*, 13 TRANSACTIONS: TENN. J. BUS. L. 309, 309 (2012).

43. EZRACHI & STUCKE, *supra* note 9, at 488.

product at a higher price; conversely, more patient consumers may receive offers with discounts to trigger purchases.<sup>44</sup>

Another example of willpower manipulation is the use of limited-time offers. These promotions are effectively deployed through big data analytics.<sup>45</sup> For example, if a company knows that a consumer usually replaces their carpet each April, the company may encourage the customer to maintain their habit through special discount offers. In this case, while a consumer may want to abstain from making the April purchase once again, the discount should reinforce the existing practice.

### III. THE ECONOMICS OF BEHAVIORAL DISCRIMINATION

Should competition law intervene in behavioral discrimination? In addition to the specific goals of a particular regulatory mechanism, the answer depends on the utility of behavioral discrimination. Competition law intervention is justified when the harms linked to behavioral discrimination outweigh the benefits. Significantly, competition law is typically engaged in situations where the market mechanism cannot restore market competition, leading to significant harms to consumers.<sup>46</sup> To determine whether regulatory intervention can be justified, the following section outlines various benefits and harms commonly associated with behavioral discrimination.

#### A. Benefits

Behavioral discrimination can enhance welfare in a competitive market.<sup>47</sup> Specifically, it is generally accepted that discrimination can improve the distribution of products and the allocation of resources.<sup>48</sup>

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44. *Id.*

45. *Note by the European Union, supra* note 4, at 12.

46. *See, e.g.,* Marc Bourreau & Alexandre de Streel, *The Regulation of Personalised Pricing in the Digital Era*, ORG. FOR ECON. COOP. & DEV. 8 (2018), [https://one.oecd.org/document/DAF/COMP/WD\(2018\)150/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2018)150/en/pdf).

47. *See* Jonathan B. Baker, *Competitive Price Discrimination: The Exercise of Market Power Without Anticompetitive Effects*, 70 ANTITRUST L.J. 643, 654 (2003).

48. RICHARD WHISH & DAVID BAILEY, *COMPETITION LAW* 778 (9th ed. 2018).

Additionally, sellers employ discriminatory practices to increase operational efficiency. For instance, restaurants offer peak pricing during the rush hours and provide discounts during the off-peak hours. This price strategy segregates different groups of consumers based on their availability. As a result, restaurants are more efficient in serving different groups of consumers.<sup>49</sup> These and other benefits are discussed below.

### 1. Production Expansion

The first benefit of behavioral discrimination is production expansion.<sup>50</sup> Having one set of prices for the entire market is common in traditional markets because it is impractical to identify individual buyers' reservation prices. Accordingly, allocative efficiency is lost among those who are willing to pay a price beyond a product's marginal cost.<sup>51</sup> Price discrimination has two benefits: First, more buyers have access to products they need, and second, sellers can sell more products to generate profits.<sup>52</sup>

Increasing production and sales is critical in a market featured by "high fixed costs and low marginal costs."<sup>53</sup> For example, running a global retail platform like Amazon involves significant fixed costs.<sup>54</sup> Therefore, a digital platform must reach a minimum scale of supply to account for these fixed costs—the more transactions on Amazon, the

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49. See, e.g., Adam Hayes, *Peak Pricing*, INVESTOPEDIA, <https://www.investopedia.com/terms/p/peak-pricing.asp#:~:text=Peak%20pricing%20is%20a%20form,when%20demand%20is%20the%20highest> (last updated Jan. 19, 2021).

50. PRESIDENT'S OFFICE, *supra* note 2, at 4.

51. Economic research shows that the best allocative efficiency is "at an output level where the price equals the marginal cost of production." See, e.g., *Allocative Efficiency*, ECON. HELP, <https://www.economicshelp.org/blog/glossary/allocative-efficiency/#:~:text=Allocative%20efficiency%20would%20occur%20at,allocative%20inefficiency%20in%20the%20economy> (last visited Sept. 11, 2022).

52. WHISH & BAILEY, *supra* note 48, at 778.

53. See Inge Graef, *Algorithms and Fairness: What Role for Competition Law in Targeting Price Discrimination Towards Ends Consumers*, 24 COLUM. J. EUR. L. 541, 544 (2018).

54. STIGLER COMM. ON DIGIT. PLATFORMS, *supra* note 14, at 7.

lower the fixed costs for each transaction, resulting in a lower market price.<sup>55</sup>

## 2. Risk Assessment

Big data analysis allows companies to accurately assess various risks. Accurate risk assessment makes it possible for companies to offer better prices to consumers.<sup>56</sup> This reduces reverse selection and discourages risky behavior.<sup>57</sup> Take the insurance industry, for example. With big data analytics, insurers can offer a wider variety of insurance packages that limit their risks. Since corporate risks are reduced, insurance companies can extend better deals to consumers.<sup>58</sup> In the end, both sides benefit from the commercial transaction.

## 3. Search Costs

Personalized services reduce search costs by allowing consumers to quickly locate relevant products and services.<sup>59</sup> For example, companies like Google may quickly identify relevant flight ticket options for consumers based on their reservation prices, obviating the need for travelers to conduct additional research. Therefore, consumers could save time on searching price information, comparing prices, and reaching shopping decisions.

### B. Harms

Whereas behavioral discrimination can promote efficiencies, it raises several significant economic and social concerns. Discussing these harms helps evaluate behavioral discrimination's overall social welfare and decide if competition law needs to intervene in the markets. These issues are discussed below.

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55. *Id.*

56. PRESIDENT'S OFFICE, *supra* note 2, at 7.

57. *Id.*

58. Oliver Ralph, *Insurance and the Big Data Technology Revolution*, FIN. TIMES (Feb. 23, 2017) <https://www.ft.com/content/bb9f1ce8-f84b-11e6-bd4e-68d53499ed71>.

59. COMPETITION & MKTS. AUTH., *supra* note 18, at 11.

### 1. Unjust Wealth Transfer

Behavioral discrimination may promote unjust wealth transfers from consumers to businesses.<sup>60</sup> The ability of companies to set prices to match consumers' willingness to pay exploits the welfare that belongs to them. The negative effects may include, for example, a "decreas[e] [in] the disposable income for things that would increase well-being" of people, such as charitable donations.<sup>61</sup>

For example, in traditional markets, wealth transfer only exists between manufacturers and consumers. But nowadays, as digital platforms play a critical role in transactions, they can take a big part of wealth from both manufacturers and consumers. Therefore, manufacturers and consumers have less wealth to further invest in activities that generate well-being of people, such as education and charity donation.

### 2. Inefficient Output Allocation

Behavioral discrimination may lead to inefficient output allocation. It can trigger unnecessary transactions where various products are distributed to individuals who do not need them.<sup>62</sup> For example, it is common for online retailers to offer special promotions (e.g., buy one get one free; 90 percent off; etc.) during seasonal holidays to increase the demand for products. These attractive discounts and time-limited offers tend to foster impulsive consumption<sup>63</sup> and allocate products to people who may not need them. Misallocating products to those who are not in need harms allocative efficiency.

### 3. Overproduction

The third concern is overproduction. Take the fast fashion market as an example. Fashion brands such as Zara, H&M, and Forever

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60. PRESIDENT'S OFFICE, *supra* note 2, at 6.

61. EZRACHI & STUCKE, *supra* note 9, at 490.

62. See Christopher Townley, Eric Morrison & Karen Yang, *Big Data and Personalised Price Discrimination in EU Competition Law*, 36 Y.B. EUR. L. 683, 688 (2017).

63. See Tomas Chamorro-Premuzic, *The Psychology of Impulsive Shopping*, GUARDIAN (Nov. 26, 2015, 4:21 PM), <https://www.theguardian.com/media-network/2015/nov/26/psychology-impulsive-shopping-christmas-black-friday-sales>.

21, at one point, launched new products very often. These products are characterized by low pricing. The business strategy successfully boosted consumption, particularly among younger shoppers. However, this form of consumption can be problematic because the products do not relate to daily necessities. Instead, people continue to buy newly launched products to keep up with their peers.<sup>64</sup> Once a fashion season is over, older clothing items may go to waste. Furthermore, the out-of-fashion garments, while technically new, can be difficult to recycle and their disposal may contribute to environmental pollution and other social harms.

#### 4. Social Costs

Social costs related to privacy violations are another harm associated with behavioral discrimination. Behavioral discrimination implicates privacy concerns due to various data harvesting and processing operations. To address these concerns, governments enact laws that balance competing interests. Costs incurred during the legislative process and enforcement measures can be significant. The expenses incurred by the state are ultimately passed on to the public. Similarly, businesses pass compliance costs to consumers through price increases.<sup>65</sup>

Moreover, behavioral discrimination can result in inequality and social instability. As noted by scholars, online sellers are likely to segment consumers by gender, wealth, age, sexual orientation, and other sensitive criteria through self-learning algorithms.<sup>66</sup> Over time, this practice may increase the negative relationships among specific groups of people, fostering “discrimination against protected groups.”<sup>67</sup> For example, Angwin and others showed that Facebook’s algorithms may not send housing ads to specific ethnic groups.<sup>68</sup>

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64. See *Fast Fashion: The Paradox of Rationality*, ECON. DECLASSIFIED (Mar. 15, 2019) <https://economicsdeclassified.wordpress.com/2019/03/15/fast-fashion-the-paradox-of-rationality/>.

65. EZRACHI & STUCKE, *supra* note 9, at 491.

66. PRESIDENT’S OFFICE, *supra* note 2, at 16.

67. *Id.*

68. See Julia Angwin, Ariana Tobin & Madeleine Varner, *Facebook (Still) Letting Housing Advertisers Exclude Users by Race*, PROPUBLICA (Nov. 21, 2017,

Lastly, one should consider other market-related social costs. Examples include higher search costs,<sup>69</sup> transactional costs triggered by complex price-setting mechanisms,<sup>70</sup> and the loss of trust in the market mechanism.<sup>71</sup>

### C. Competition Law Intervention

Scholars assume that competition law is an effective tool to deal with emerging high-tech related issues. Competition law intervention is generally justified if there is a threat to market competition and consumers. Hence, in determining whether competition law should regulate behavioral discrimination, it is important to consider the impact of discrimination on market competition.

The impact of behavioral discrimination on market competition is not clearly understood. The Organisation for Economic Co-Operation and Development's (OECD) report suggests that price discrimination is "typically pro-competitive and often enhances consumer welfare."<sup>72</sup> The US echoes this view in its report to the OECD.<sup>73</sup> Based on this assessment, competition law should intervene only where "price discrimination might feature as an aspect of an exclusionary strategy meant to enhance or protect market power."<sup>74</sup>

When looking at behavioral discrimination in the context of big data analytics, the international community is similarly divided. Some

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1:23 PM), <https://www.propublica.org/Article/facebook-advertising-discrimination-housing-race-sex-national-origin>.

69. Roundtable on "Price Discrimination" – Note by the United Kingdom, ORG. FOR ECON. COOP. & DEV. 5 (Nov. 2, 2016) [hereinafter *Note by the United Kingdom*], [https://one.oecd.org/document/DAF/COMP/WD\(2016\)68/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2016)68/en/pdf).

70. COMPETITION & MKTS. AUTH., *supra* note 18, at 11.

71. *Id.* at 5.

72. Background Note by the Secretariat, *supra* note 6, at 7.

73. See *Personalised Pricing in the Digital Era* – Note by the United States, ORG. FOR ECON. COOP. & DEV. 2 (Nov. 21, 2018) [hereinafter *Note by the United States*], [https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/personalized\\_pricing\\_note\\_by\\_the\\_united\\_states.pdf](https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/personalized_pricing_note_by_the_united_states.pdf).

74. *Id.* (quoting Roundtable on "Price Discrimination" – Note by the United States, ORG. FOR ECON. COOP. & DEV. 6 (Nov. 21, 2016), [https://one.oecd.org/document/DAF/COMP/WD\(2016\)69/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2016)69/en/pdf)).

jurisdictions presume that the practice supports market competition. For example, in the view of the US, competition law “would likely not condemn a firm’s use of personalised pricing unless it is part of a collusive agreement or some other arrangement that harms the competitive process.”<sup>75</sup> However, other jurisdictions find that the practice is anti-competitive. For instance, the UK report to the OECD pointed out that online behavioral discrimination is more likely to harm consumer welfare because it increases the ability of businesses to accurately target buyers and because it is easier to attract unsophisticated consumers.<sup>76</sup>

Ultimately, each jurisdiction has different views on behavioral discrimination. But it is evident that behavioral discrimination is associated with potentially significant harms. Furthermore, it may have detrimental effects on market competition. Thus, competition law is needed to restore market competition of digital markets. To this end, the next section of this Article considers the application of competition law to behavioral discrimination. This next section answers the question of whether existing competition law regimes are adequately equipped to respond to the anticompetitive effects of behavioral discrimination.

#### IV. THE APPLICABILITY OF COMPETITION LAW TO BEHAVIORAL DISCRIMINATION

In considering the capacity of the competition law regimes in the EU, US, Japan, and Singapore to address the harms associated with behavioral discrimination, this Article compares these competition law systems, and a given jurisdiction’s broader legal toolbox. Examples of additional regulatory tools include consumer and data protection laws. While the previous section focuses on market efficiency-related questions, this section considers a wider range of concerns in the application of competition law principles.

At the onset, it is important to emphasize that competition law develops in diverse directions across different jurisdictions since it “is a social construct and stems from the domestic foundations and values of each jurisdiction.”<sup>77</sup> Furthermore, competition law evolves due to

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75. *Id.* at 4.

76. *Note by the United Kingdom*, *supra* note 69, at 12.

77. *See* Ariel Ezrachi, *Sponge*, 5 J. ANTITRUST ENF’T 49, 51 (2017).

changes in a jurisdiction's "social reality, experience and logic," and the country's economic development.<sup>78</sup> Consequently, this analysis respects unique legislative mechanisms adopted in the four jurisdictions.

Before exploring the four jurisdictions, it is essential to note two types of discrimination: exploitative and exclusionary. These two types of discrimination feature distinct elements and affect participants at different levels of the supply chain. Exploitative discrimination focuses on exploiting consumers, often by transferring wealth from consumers to sellers. Conversely, exclusionary discrimination focuses on the ability to target users and customers in a way that limits the ability of others to compete, resulting in their exclusion.

Keeping the above-mentioned types of behavioral discrimination in mind, this section explores the regulation of behavioral discrimination in the EU, US, Japan, and Singapore. And for illustrative purposes, this Article mainly focuses on personalized pricing.

#### *A. European Union*

Article 102 of the Treaty of Functioning of the European Union (TFEU), a general abuse of dominance clause, prohibits dominating undertakings from abusing their dominant position in ways that may negatively affect trade between member states.<sup>79</sup> To satisfy the requirements of Article 102, a plaintiff must prove both that the accused has a dominant position and abuses it in business dealings.

To find whether the accused abused its dominant position, the practice at issue must diverge from normal competition.<sup>80</sup> In other words, the practice must not amount to competition on the merits. A dominant firm's practice that excludes or marginalizes competitors due

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78. *Id.*

79. Article 102 of the TFEU says that "[a]ny abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States." Consolidated Version of the Treaty of Functioning of the European Union art. 102, Sept. 5, 2008, 2008 O.J. (C 115) 89 [hereinafter TFEU].

80. Case 85/76, *Hoffmann-La Roche v. Comm'n*, 1979 E.C.R. 461.

to inefficiencies, high prices, poor quality, or a lack of choices is regarded as competition on the merits.<sup>81</sup>

Behavioral discrimination may fall under Articles 102(a) and 102(c) of the TFEU. Article 102(a) targets unfair price (i.e., exploitative discrimination), and Article 102(c) targets exclusionary price discrimination. This Article will, therefore, discuss the three types of discriminatory behaviors under the EU law.

### 1. Exploitative Discrimination—Article 102(a)

Article 102(a) prohibits dominant firms from imposing “unfair purchase or selling prices or other unfair trading conditions” on transactions.<sup>82</sup> This Article intends to prevent the dominant firms from exploiting their position by manipulating prices or other trading conditions at buyers’ expense. Proof of harm to buyers is sufficient to satisfy this clause. Proving harm to competition or harm to rivals is not required.

Proving the element of “unfairness” is critical in triggering the application of Article 102(a). The mere presence of high prices is not enough to trigger Article 102(a). Consequently, a plaintiff must show that the excessive price or trading conditions create unfairness.<sup>83</sup> Prices are unfair when they bear “no reasonable relation[ship] to the economic value of the product.”<sup>84</sup>

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81. E.g., Case C-457/10, *AstraZeneca v. Comm’n*, ECLI:EU:C:2012:770, ¶¶ 133–34 (Dec. 6, 2012); Case C-413/14, *Intel Co. v. Comm’n*, ECLI:EU:C:2017:632, ¶134 (Sept. 6, 2017).

82. Article 102 of the TFEU says that:

Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States. Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions.

TFEU art. 102, Sept. 5, 2008, 2008 O.J. (C 115) 89

83. Case 27/76, *United Brands v. Comm’n*, 1978 E.C.R. 207.

84. WHISH & BAILEY, *supra* note 48, at 740.

85. *Id.*

A critical point in determining whether the price at issue is unfair involves looking at its relationship to cost and value.<sup>85</sup> If the price reflects the costs associated with supplying products or a product's economic value, the price is not unfair, even though it could be quite high.<sup>86</sup> Following this principle, a series of cases held that charging different prices merely based on consumers' reservation prices<sup>87</sup> or income is considered exploitative abuse.<sup>88</sup>

Behavioral discrimination pricing may fall under Article 102(a) if the practice is deemed to be unfair. When digital platforms analyze buyers' behavioral data to identify their reservation prices and generate an appropriate price tag, the operation may amount to first-degree price discrimination.<sup>89</sup> This practice can be described as an Article 102(a) violation because the personalized price may not reflect the competitive market price.

Similarly, price steering is likely to violate Article 102(a). In the price steering process, sellers segment different buyers into groups based on big data analytics and then offer different price options to each specific group. For example, a publisher may offer the same textbook

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86. See Case C-242/95, *GT-Link A/S v. De Danske Statsbaner*, 1997 E.C.R. I-4449; Case T-151/01 *Der Grüne Punkt - Duales System Deutschland GmbH v. Comm'n*, 2007 E.C.R. II-1607.

87. See Case T-128/98, *Aéroports de Paris v. Comm'n*, 2000 E.C.R. II-3929; Case C-163/99, *Portuguese Republic v. Comm'n*, 2001 E.C.R. I-2613; Case T-301/04, *Clearstream Banking AG v. Comm'n*, 2009 E.C.R. II-3155.

88. See Case C-52/07, *Kanal 5 Ltd. v. Föreningen Svenska Tonsättarens Internationella Musikbyrå (STIM) upa*, 2008 E.C.R. I-9275.

89. First-degree discrimination (also called perfect price discrimination) occurs when sellers can "identify and charge each consumer its reservation price." Therefore, each consumer "must pay the highest it is willing to pay for each unit of output," generating the most benefits to sellers. In the past, economists believed that perfect price discrimination could not exist due to the high costs involved in the investigation of market structures and consumers' reservation prices. See HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 769 (5th ed. 2016).

90. Second-degree price discrimination occurs when sellers create a price schedule that allows consumers to locate themselves on the schedule through their own purchasing behavior. It is common for retailers to set different unit prices based on the number of purchased goods. Typically, the price decreases as consumers choose packages with more items. Therefore, consumers can select packages that fit their needs. *Id.* at 769–70.

for 300 pounds to students, while charging 600 pounds to professors. This is a third-degree price discrimination practice,<sup>90</sup> and this conduct may fall within the scope of Article 102(a). As noted above, a violation may be found where the price-setting mechanism is not based on the costs associated with the product or its value to buyers, but rather on buyers' reservation prices.

While Article 102(a) provides some protection to consumers, it is not appealing to regulatory agencies because it is difficult to identify unfairness. After all, "unfairness" is subjective. The dividing line between acceptable and unfair business dealings may change over time. Furthermore, it may be practically challenging to prove the required elements of unfair pricing in the digital world by looking at the correlations between the offered price and the consumer reservation price, along with the parameters used by algorithms in selecting different prices.

## 2. Exclusionary Discrimination—Article 102(c)

Article 102(c) prohibits dominant firms from "applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing the firms at a competitive advantage." Under this Article, discriminatory transactions must cause competitive disadvantages to the favored trading partners over the disfavored trading parties.

For example, in *United Brands v. Commission*, the Court of Justice of the European Union (CJEU) condemned the defendant for selling bananas at different prices to trading partners based on their EU member country, putting the favored trading partners in a competitive advantage over their competitors.<sup>91</sup> This judicial decision confirmed that discriminatory behaviors could distort competition in a vertical market.

In *British Airways v. Commission*, the CJEU held that the alleged discriminatory behavior must generally hinder the undertaking's trading partner; however, an "actual quantifiable deterioration" is not

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91. Case 27/76, *United Brands v. Comm'n*, 1978 E.C.R. 207.

required.<sup>92</sup> Thus, merely showing a price differential is insufficient to infer competition harms. Instead, courts will consider the effect of discriminatory prices on the trading partners' costs and benefits as they relate to the operation of a business.<sup>93</sup>

Similarly, in a recent case, *MEO-Serviços de Comunicações e Multimédia*, the CJEU repeated the conditions established in *Airway v. Commission*, holding that "behaviour of the undertaking in a dominant position tends . . . to lead to a distortion of competition between . . . business partners."<sup>94</sup> This holding reconfirmed that in determining discriminatory behaviors' antitrust violation, courts should look carefully at the action's anticompetitive effect on the market, which could be inferred from the defendant's dominant position.

In determining competitive advantage, courts consider all relevant circumstances such as the defendant's market position, the trading partner's bargaining power, the essence of the pricing strategy, and other potential strategies that could exclude the defendant's competitors.<sup>95</sup> To prove the existence of competition disadvantage, courts do not require plaintiffs to prove actual quantifiable deterioration, but "the competitive disadvantage" must be significant enough to have an impact on the competitive position of the discriminated company.<sup>96</sup>

Article 102(c) may apply to cases where digital platforms employ behavioral discrimination to favor specific businesses in downstream markets. For instance, digital platforms can take advantage of consumers' imperfect willpower or use decoys to promote purchases from selected businesses. Since digital platforms are a critical source of information, the selected products have high visibility over non-selected products and therefore obtain a strong competitive position over

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92. Case C-95/04, *British Airways v. Comm'n*, 2007 E.C.R. I-2331. In *Clearstream Banking AG v. Commission*, T-301/04, 2009 E.C.R. II-3155, the Court interpreted the element of "competitive advantage" under Article 102(c) as a distortion of the market of the trading partners and their competitors.

93. WHISH & BAILEY, *supra* note 48, at 782.

94. Case C-525/16, *Meo-Serviços de Comunicações e Multimédia*, ECLI:EU:C:2017:1020, ¶ 86 (Dec. 20, 2017).

95. *Id.* at ¶¶ 105–10.

96. See ARIEL EZRACHI, *EU COMPETITION LAW: AN ANALYTICAL GUIDE TO THE LEADING CASES* 251 (6th ed. 2018).

competing products. Thus, the digital platform's behavioral discrimination harms the competition in the downstream market.

There are some challenges, however, in applying Article 102(c) to digital platforms. First, it may be difficult to show competitive disadvantages. For example, since Amazon is an open retail platform, there can be multiple digital sellers on Amazon at the same time. This fact makes it difficult for the injured seller to show that its business loss was directly caused by a favored seller, even though Amazon's algorithms may clearly favor some sellers.

Secondly, it is questionable whether Article 102(c) applies when the trading partner is an intermediary buyer.<sup>97</sup> The issue of whether the term "trading partner" under Article 102(c) includes the final consumer is unsettled. Notably, experts have found it difficult to imagine that price discrimination may leave other consumers at a competitive disadvantage.<sup>98</sup>

### B. *The United States*

The Robinson-Patman Act amended section two of the Clayton Act, which prohibits sellers from selling commodities at different prices that may substantially "lessen competition or tend to create a monopoly in any line of commerce."<sup>99</sup> The Robinson-Patman Act expects sellers in the upstream market to treat customers in the downstream market "in a proportionately equal manner."<sup>100</sup>

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97. Graef, *supra* note 53, at 548; *see also* WHISH & BAILEY, *supra* note 48, at 781.

98. *See* Alan M. Sears, *The Limits of Online Price Discrimination in Europe*, 21 COLUM. SCI. & TECH. L. REV. 1, 12 (2019).

99. 15 U.S.C. § 13(a). Notably, section 5 of the Federal Trade Commission Act (FTCA) prohibits "unfair methods of competition" from applying to discrimination. However, since the Robinson-Patman Act addresses discriminatory practices, the Act excludes the application of the FTCA. Therefore, this Article will not discuss section 5 of the FTCA. *See* Maureen K. Ohlhausen, *Section 5 of the FTC Act: Principles of Navigation*, 2 J. ANTITRUST ENF'T 1, 1 (2013).

100. Notably, the Act only applies to companies that possess a dominant position in the upstream market. It does not require the presence of market power. *See* HOVENKAMP, *supra* note 89, at 75. Besides, the Act only applies to commodities transactions, and therefore other types of transactions, such as services or intellectual property rights, are not covered. Despite this, discriminatory practices that harm market competition may be caught by section 2 of the Sherman Act.

To bring a claim under the *Act*, a plaintiff must show that the practice can harm competition.<sup>101</sup> This framework is considered below.

### 1. Exploitative Discrimination

Unlike Article 102(a) of the TFEU, the Robinson-Patman Act does not prohibit exploitative abuse. For example, US courts do not find that charging monopoly prices is illegal if the defendant does not adopt anticompetitive means to obtain or maintain its monopoly position. Instead, the US antitrust law considers the ability to charge a super competitive price as “an important element of the free-market system.”<sup>102</sup> Since dominant companies must absorb significant fixed costs and accept serious business risks, monopoly prices incentivize firms to invest in innovation, which ultimately benefits consumers.<sup>103</sup> Therefore, prices matching customers’ reservation price offered by discriminatory behaviors is not prohibited under the Robinson-Patman Act.

### 2. Exclusionary Discrimination

The Robinson-Patman Act bans a dominant firm’s discriminatory behavior that harms its competitors in horizontal markets. Examples include a situation where a manufacturer “reduces its prices in a specific geographic market and causes injury to its competitors in the same market.”<sup>104</sup> In *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, the Supreme Court required the showing of a substantial potential of the practice to “create or perpetuate either a monopoly or

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101. *Price Discrimination: Robinson-Patman Violations*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/price-discrimination-robinson-patman> (last visited Sept. 18, 2022).

102. *Roundtable on “Price Discrimination” – Note by the United States*, *supra* note 74, at 3 (citing *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko*, 540 U.S. 398, 407 (2004)).

103. *Id.* at 3–4 (first citing *Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic*, 65 F.3d 1406, 1413 (7th Cir. 1995), then citing *Verizon Commc’ns Inc.*, 540 U.S. at 407).

104. *Price Discrimination: Robinson-Patman Violations*, *supra* note 101.

oligopoly” that injures competition.<sup>105</sup> Thus, to demonstrate the alleged action violates the Act, a plaintiff must show its potential harm to horizontal competition among competitors.

The Robinson-Patman Act also forbids discriminatory behaviors that harm competition in vertical markets. For instance, a firm in the upstream market can harm the downstream market if it charges competing buyers with different prices for the similar commodity. This situation generally occurs when a manufacturer provides price advantages to favored customers, putting the customers’ competitors at a competitive disadvantage.<sup>106</sup> Notably, the qualified private plaintiff must be in a competitive relationship with the favored customers in the same market.<sup>107</sup>

Due to its broad meaning, the Robinson-Patman Act may apply to behavioral discrimination that causes harm to competition in either horizontal or vertical markets. Unlike EU competition law, the Act and US courts do not limit those who receive discriminatory treatments to the sellers’ trading partners. Instead, the Act focuses on the practice’s anti-competitive effect on markets. Therefore, if personalized pricing, services, and offers do harm market competition, the Robinson-Patman Act can apply.

### C. Japan

Discriminatory practices in Japan are governed by Article 2(9)(ii) of the Antimonopoly Act (AMA). This Article prohibits “unjustly and continually supplying goods or services at a price applied differently between regions or between parties, thereby tending to cause difficulties to the business activities of other enterprises.”<sup>108</sup>

Another statute that prohibits discriminatory practices in Japan is paragraph three of the Designation of Unfair Trade Practice (General

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105. HOVENKAMP, *supra* note 89, at 776 (citing *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993)).

106. *Price Discrimination: Robinson-Patman Violations*, *supra* note 101.

107. *Feesers, Inc. v. Michael Foods, Inc.*, 591 F.3d 191, 197–98 (3d Cir. 2010).

108. Article 2(9)(ii) of the AMA prohibits unfair trade practice “unjustly and continually supplying goods or services at a price applied differentially between regions or between parties, thereby tending to cause difficulties to the business activities of other enterprise.”

Designation), which prevents firms from “[u]njustly affording favorable or unfavorable treatment to a certain entrepreneur [regarding] the terms or execution of a trade.”<sup>109</sup> In cases where both Article 2(9)(ii) and paragraph three violations are found, the former takes precedence.<sup>110</sup> The following sections explore the regulation of discrimination under the two competition rules.

### 1. Exploitative Discrimination

The structure and the wording of “other enterprises” and “certain entrepreneur” in the two rules suggest that Japan’s antitrust law intends to protect competing firms from unlawful exclusionary conduct. Thus, the two rules “address the lessening of free competition.”<sup>111</sup> As such, scholars suggest that the two rules are inapplicable to consumers because the practice “does not cause any exclusionary effects on its own,” even though discriminatory treatment can harm consumers.<sup>112</sup>

Additionally, Japan’s competition law does not prohibit more efficient conduct because such exclusion is “a result of fair and free competition, which the AMA intends to promote.”<sup>113</sup> Consequently, personalized pricing is legal, provided that the dominant company does not adopt any exclusionary practices, even if individuals are charged more than the market price.

### 2. Exclusionary Discrimination

According to Article 2(9)(ii) and paragraph three, discriminatory behaviors are forbidden in Japan only when employed to exclude existing competitors or in situations where the actions foreclose operations of prospective entrants. For instance, price discrimination is

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109. *Designation of Unfair Trade Practices*, JAPAN FAIR TRADE COMM’N (June 18, 1982), [https://www.jftc.go.jp/en/legislation\\_gls/unfairtradepractices.html](https://www.jftc.go.jp/en/legislation_gls/unfairtradepractices.html).

110. MASAKO WAKUI, *ANTIMONOPOLY LAW: COMPETITION LAW AND POLICY IN JAPAN* 164 (2d ed. 2018).

111. *Id.*

112. *Id.* at 165.

113. *Roundtable on “Price Discrimination” – Note by Japan*, ORG. FOR ECON. COOP. & DEV. 3 (Nov. 21, 2016), [https://one.oecd.org/document/DAF/COMP/WD\(2016\)66/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2016)66/en/pdf).

illegal if the seller manipulates lower prices to attract customers and therefore excludes competitors from the market (exclusionary effects).<sup>114</sup>

In general, exclusionary conduct is defined as “various conducts that would cause difficulty for other enterprises to continue their business activities or for new market entrants to commence their business activities, [and] there[fore] would be likely to cause a substantial restraint of competition in a particular field of trade.”<sup>115</sup>

Japan’s competition law prohibits horizontal exclusionary discrimination. For example, Japan regulates unjust low-price sales that harm horizontal competition. The practice amounts to a primary line injury violation where a company performs a price-cutting strategy for sales territories or customers of its competitors with the intent of eliminating specific businesses.<sup>116</sup>

To apply Article 2(9)(iii), a plaintiff must show that the alleged price is “significantly below cost and continuity.”<sup>117</sup> Once the price difference is established, there is a presumption that the practice “impe[d] fair competition.”<sup>118</sup> By contrast, when the alleged prices “do not satisfy Article 2(9)(iii) requirements, paragraph six of the General Designation supplements Article 2(9)(iii).”<sup>119</sup>

The Japanese competition law also prohibits vertical exclusionary discrimination, i.e., margin squeeze. Margin squeeze occurs when an enterprise in the upstream market, in supplying necessary products for downstream businesses, supplies its own affiliate businesses at a more favorable price or supplies independent businesses in the downstream market at a disadvantageous price.<sup>120</sup> In summary, margin squeeze exclusionary behavior may amount to a violation when it harms vertical competition.

Existing Japanese rules regulating discriminatory behavior may not apply to digital behavioral discrimination. For example, for

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114. WAKUI, *supra* note 110, at 166.

115. Roundtable on “Price Discrimination”—Note by Japan, *supra* note 113, at 3.

116. *See id.* at 4.

117. WAKUI, *supra* note 110, at 157.

118. *Id.*

119. *Id.*

120. *Id.* at 223.

horizontal exclusion, Japan's AMA Article 2(9)(iii) requires a plaintiff to show that prices are significantly below costs. However, in behavioral discrimination, prices are set to match a buyer's reservation price rather than product costs. Similarly, the rule is problematic in its application to behavioral discrimination in vertical exclusion situations. Finally, margin squeeze does not constitute behavioral discrimination in Japan, since in most cases, online sellers do not provide necessary products for buyers to be competitive in the downstream markets, which prevents the practice from meeting the margin squeeze situation.

#### *D. Singapore*

Discriminatory behavior is regulated by section 47(1) of the Singapore Competition Act (SCA), which prohibits "any conduct on the part of one or more undertakings which amounts to the abuse of a dominant position in any market in Singapore."<sup>121</sup>

Section 47(1) is a general rule; therefore, the Competition and Consumer Commission of Singapore (CCCS) issued the Guidelines on the section 47 Prohibition 2016 (Guidelines). According to the Guidelines, conduct may constitute abuse of a dominant position when it "protects, enhances, or perpetuates the dominant position of an undertaking in ways unrelated to competitive merit."<sup>122</sup> Also, the conduct must have at least "the potential to significantly impact competitive conditions in Singapore."<sup>123</sup> Competition process is harmed by conduct that "would be likely to foreclose competitors in the market."<sup>124</sup>

Specifically, section 47(2)(c) prevents firms from "applying dissimilar conditions to equivalent transactions with other trading parties,

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121. Section 47(1) of the SCA says that "Subject to section 48, any conduct on the part of one or more undertakings which amounts to the abuse of a dominant position in any market in Singapore is prohibited."

122. COMPETITION & CONSUMER COMM'N OF SING., CCCS GUIDELINES ON THE SECTION 47 PROHIBITION 3 (2022), <https://www.cccs.gov.sg/-/media/custom/ccs/files/legislation/ccs-guidelines/revised-guidelines-jan-2022/3-cccs-guidelines-on-the-section-47-prohibition.pdf?la=en&hash=BD4815AF6C5B6AE3A10546251BCFFE591ED619D9>.

123. *Id.* at 10.

124. *Id.* at 11.

thereby placing them at a competitive disadvantage.”<sup>125</sup> Discrimination can occur based on quality or price.<sup>126</sup> In determining whether discrimination constitutes abuse, regulators consider “efficiencies or benefits, such as the efficient recovery of fixed costs, the substantial expansion of demand or the opening up of new market segments.”<sup>127</sup>

### 1. Exploitative Discrimination

The SCA does not seem to prohibit exploitative discrimination because Annex C of the Guidelines do not explicitly ban abusive discrimination. Further, Section 47 of the SCA indicates that the Act covers abuses that impede market competition. Consequently, pure abuse of the market position, such as by setting excessive prices, does not violate section 47 of the Act if there is no harm to the market.<sup>128</sup>

### 2. Exclusionary Discrimination

Section 47 of the SCA prohibits exclusionary discrimination. To be discriminatory, the practice must distort market competition.<sup>129</sup> Annex C of the Guidelines lists two scenarios where alleged discriminatory practice leads to competition harms: predatory pricing and margin squeeze.

Predatory pricing can distort the market by promoting horizontal exclusion. Therefore, section 47(2)(a) bans “predatory behaviour towards competitors.” The Guidelines defines predatory pricing as “setting prices so low that it forces one or more undertakings out of the market.”<sup>130</sup> While the rule does not expressly implicate the supply chain-level, in practice, it is included in the horizontal market.

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125. SCA Section 47(2)(c) says that “For the purposes of subsection (1), conduct may, in particular, constitute such an abuse if it consists in . . . (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage.”

126. COMPETITION & CONSUMER COMM’N OF SING., *supra* note 122, at 35.

127. *Id.*

128. *See* DOTECON LTD., E-COMMERCE AND ITS IMPACT ON COMPETITION POLICY AND LAW IN SINGAPORE 102 (2015), <https://www.dotecon.com/assets/images/DotEcon-Ecommerce-Final-Report.pdf>.

129. COMPETITION & CONSUMER COMM’N OF SING., *supra* note 122, at 35.

130. *Id.* at 31.

To prove predatory pricing violations, a plaintiff must show “pricing below cost, intention to eliminate a competitor, and the feasibility of recouping losses.”<sup>131</sup> Authorities will presume predation when “price is below the average variable cost (AVC) of production”; they will consider it as evidence of predation when the “price is above AVC but below average total cost (ATC) of production”; and will find no predation when the “price is above ATC.”<sup>132</sup>

Margin squeeze may lead to vertical exclusion. Margin squeeze occurs only when the defendant is in “a vertically integrated undertaking” that dominates “supply of an important input for a downstream market in which it also operates.”<sup>133</sup> Margin squeeze takes place when the undertaking “set[s] such a low margin between its input price (e.g., wholesale price) and the price it sets in the downstream market (e.g., retail price)” to exclude its downstream competitors or eliminate their ability to compete.<sup>134</sup> Margin squeeze is found when efficient downstream firms cannot generate normal profits.<sup>135</sup>

Singapore’s competition law regime does not respond to the concerns associated with behavioral discrimination. Since behavioral discrimination prices do not go below production costs in most cases, behavioral discrimination does not amount to predatory pricing in Singapore. Nor does margin squeeze target behavioral discrimination. The function of margin squeeze is to protect competition in the downstream market by prohibiting suppliers from providing the product at a lower price than the favored retailers. Consequently, in most behavioral discrimination situations unrelated to price, the margin squeeze analysis is not helpful. In instances of price-related behavioral discrimination, margin squeeze is inapplicable since prices are not below product costs but merely match consumer reservation prices.

## V. POLICY IMPLICATIONS

The EU, US, Japan, and Singapore’s competition law mechanisms surveyed in this Article are not effective in responding to the

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131. *Id.*

132. *Id.* at 32.

133. *Id.* at 35.

134. *Id.*

135. *See id.*

negative effects associated with behavioral discrimination. There appears to be a general mismatch between the goals of competition law and the realities of behavioral discrimination. Competition law regimes can be assessed at two levels. At the first level, one considers policy goals identified by the jurisdiction. For example, some jurisdictions do not consider exploitative discrimination as a matter of regulatory concern. At the second level, one considers enforcement challenges. This framework is adopted below for the assessment of the four competition regimes surveyed here.

### *A. Competition Policy*

At the first analytical level, it is important to consider whether competition law should prohibit exploitative discrimination. Jurisdictions where consumer protection is prioritized over economic efficiency tend to prohibit exploitative discrimination. For example, the EU regards exploitative discrimination as an abuse of the dominant market position.<sup>136</sup>

In contrast, most jurisdictions treat exploitative pricing as an essential market mechanism to encourage innovation, even though the practice may harm consumers. For instance, US competition law does not prevent dominant firms from “charging any price that the market will bear.”<sup>137</sup> Under US law, excessive pricing in discrimination strategies is viewed as “informative signals about market conditions”<sup>138</sup> that may enhance competition, ultimately benefiting consumers.<sup>139</sup> However, US competition law seems oblivious to the exploitative harms faced by consumers—a key concern in behavioral discrimination.

To explore effective competition law approaches to the regulation of exploitative discrimination, that is, to address the behavioral discrimination problem, this Article considers two related questions. First, should competition law be amended to cover exploitation? If so, should the issue be targeted through regulation, akin to the model pursued by the EU?

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136. Bourreau & de Streel, *supra* note 46, at 8.

137. *Note by the United States*, *supra* note 73, at 5.

138. *Id.*

139. *Id.*

Academic literature is split on whether it is necessary to prohibit exploitative discrimination. Some scholars suggest that competition law intervention in exploitative abuses is risky because an error may “distort incentives to invest and innovate by dominant and small firms,”<sup>140</sup> and because the market can usually self-correct abuses.<sup>141</sup> Furthermore, it is hard to decide whether pricing is excessive without a solid understanding of specific industries.<sup>142</sup> Competition law authorities are not sector regulators. Therefore, they do not “have deep knowledge of the sector being investigated.”<sup>143</sup> Indeed, even in a jurisdiction where exploitative discrimination is regulated, authorities are often reluctant to investigate various allegations.<sup>144</sup>

When one considers this debate from the consumer protection perspective, intervention seems more desirable. Behavioral discrimination aims to increase demand by approaching buyers’ reservation prices. In some respects, transactions involving behavioral discrimination exploit consumers. Thus, competition law intervention in exploitative discrimination can protect consumers.

Furthermore, in extreme cases, where the market cannot self-correct due to the “presence of high and non-transitory barriers to entry” and the absence of sector regulators, competition law intervention may be the only practical tool to address market imbalances.<sup>145</sup>

For example, multiple researchers have noted that the “big four” digital platforms, Google, Facebook, Amazon, and Apple are monopolists due to their vast market shares. The digital marketplace is characterized by substantial entry barriers due to the presence of economies of scale and network effects. This environment prevents new small and medium-sized companies from entering the market and competing with the big four.<sup>146</sup> Therefore, the digital market, where behavioral

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140. Bourreau & de Streel, *supra* note 46, at 8.

141. *Id.*

142. See Massimo Motta & Alexandre de Streel, *Excessive Pricing and Price Squeeze Under EU Law*, in EUROPEAN COMPETITION LAW ANNUAL 2003: WHAT IS AN ABUSE OF A DOMINANT POSITION? 91 (Claus-Dieter Ehlermann & Isabela Atanasiu eds., 2006).

143. *Id.*

144. *Background Note by the Secretariat*, *supra* note 6, at 27.

145. Bourreau & de Streel, *supra* note 46, at 16.

146. STIGLER COMM. ON DIGIT. PLATFORMS, *supra* note 14, at 7–8.

discrimination is most prevalent, is less likely to be self-regulated through competition. Sector-specific regulations for digital platforms are rarely observed around the world. This means that effective anti-trust measures are particularly important in the context of digital platforms. Admittedly, some scholars suggest that consumer protection agencies may protect consumers from exploitative discrimination. However, these institutions lack the tools and experience necessary to manage digital markets.<sup>147</sup> In summary, competition law intervention may be necessary in the context of digital platforms.

The remaining question is whether it would be sufficient to add exploitative discrimination into existing competition law regimes, as highlighted by the TFEU Article 102(a). Formal codification is desirable for several reasons. It clearly indicates lawmakers' intent to prohibit specific behaviors and, therefore, obliges law enforcement agencies to take enforcement measures. Codification also sends a clear message to businesses—avoid certain behaviors.

However, it is acknowledged that there is no consensus among lawmakers on the need to prohibit behavioral discrimination under competition law. First, our competition law rules emerged prior to the rise of big data analytics technologies. Second, due to rapid technological changes, lawmakers and courts have not fully understood the nature of digital behavioral discrimination. This is significant because competition law strives to accommodate several policy goals.<sup>148</sup> Thus, policy experts must balance competing priorities in structuring national competition law frameworks. Since the subject matter is poorly understood, an in-depth assessment remains a major challenge.

These realities are acknowledged in this Article. Consequently, the Article does not propose concrete legislative amendments for behavioral discrimination. Rather, the Article offers several guiding principles for decision-makers.

### *B. Enforcement Difficulties*

This research demonstrates that existing competition law rules are limited in scope when it comes to behavioral discrimination. Current rules concerning price discrimination, predatory pricing, margin

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147. *Id.* at 88.

148. Ezrachi, *supra* note 77, at 51.

squeeze, and refusal to deal do not address the potential harms of behavioral discrimination—most existing rules dealing with discriminatory behavior focus only on prices and harms to horizontal and vertical markets. However, only one form of behavioral discrimination concerns pricing: personalized pricing. As noted above, personalized pricing sets prices close to consumers’ reservation price rather than according to the cost of a product. Furthermore, in most cases, online sellers discriminate between buyers who do not compete. Thus, the application of current rules that focus on prices and competition to exclusionary behavioral discrimination is unlikely to offer meaningful regulatory protections.

This Article also recognizes that regulatory agencies may have limited incentives to target alleged violators.<sup>149</sup> Challenges also appear on the private enforcement side, since consumers may not be aware of unfair pricing. As highlighted above, behavioral discrimination is highly personalized. It blinds buyers to comparative prices offered by different sellers. Without knowing that they are treated unfairly, buyers are unlikely to file complaints against major digital platforms for behavioral discrimination practices. Assuming that legal intervention is considered, it is also difficult to meet the evidentiary requirements. These and other regulatory challenges are explored below.

### 1. Dominant Position

To show that discriminatory practices violate competition law, the plaintiff must prove that the defendant company enjoys a dominant position or substantial market power. This requirement is explicitly identified in the EU and Singapore antitrust rules. Additionally, courts in Japan and the US impose this requirement, even though it is not stated in the governing legislation.

Dominant position (equivalent to “monopoly power” or “having a substantial market power”), is a prerequisite for applying competition law rules to price discrimination. In *United Brands v. Commission*, the CJEU defined dominant position as “a position of economic strength enjoyed by an undertaking which enables it to prevent effective

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149. Townley, Morrison & Yang, *supra* note 62, at 4.

competition.”<sup>150</sup> The US Supreme Court defined monopoly power as “the power to control prices or exclude competition.”<sup>151</sup>

In the context of behavioral discrimination, most discriminatory practices can fall outside of competition law rules due to the dominant position requirement. For example, small app developers may collect personal data on millions of users to facilitate behavioral discrimination practices without having a dominant position in the market. As another example, Quora is an online networking platform that has about 300 million users.<sup>152</sup> Comparatively, Facebook has 2.912 billion users.<sup>153</sup> While Quora cannot be considered a dominant player in the online networking market, it is well positioned to engage in manipulation practices.<sup>154</sup> Quora illustrates that although a company’s practice may have a strong influence on users, competition law is often inapplicable.

Business models of digital platforms further complicate the competition law analysis. Millions of online sellers purchase targeted advertising from digital platforms. Alternatively, they rely on these platforms to carry out their trades. These sellers may not be aware that platforms are employing decoys, price steering, targeted advertising, and other forms of manipulation. Since platforms are not sellers’ agents, platforms can avoid regulatory oversight.

## 2. Antitrust Analysis Challenges

Determining whether personalized advertising sent to consumers can be treated as equivalent transactions is challenging. The inquiry depends on the valuation of transactions. It is easier to conclude that two transactions are equivalent if the transactions concern similar

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150. Case 27/76, *United Brands v. Comm’n*, 1978 E.C.R. 207.

151. *United States v. E.I. Du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1956).

152. Si Quan Ong, *Quora Marketing: ~1 Million Views Generated. Here’s How to Replicate our Success*, AHREFS: BLOG (Nov. 7, 2019), <https://ahrefs.com/blog/quora-marketing/>.

153. *See Number of Monthly Active Facebook Users Worldwide as of 4th Quarter 2021*, STATISTA, <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/> (last updated Aug. 22, 2022).

154. *See Grow Your Business with Quora Ads*, QUORA FOR BUS., <https://q.quoraforbusiness.com/business> (last visited Sept. 18, 2022).

products. The answer becomes far more problematic, however, when the transactions involve digital products.

Take digital books as an example. Online publishers may design various packages by considering consumers' occupation, age, previous transactions, and so on. Accordingly, they will offer an enticing product based on big data analysis research. Under such conditions, comparisons of products are difficult due to the presence of too many equally important factors. Product comparison becomes particularly costly when publishers adopt complicated and untransparent algorithms.

### 3. Discriminatory Behaviors

Another enforcement difficulty arises from extraordinarily complex and untransparent price-setting mechanisms. Discriminatory behavior must be proved by the complainants in antitrust lawsuits. However, under discriminatory schemes, prices, items, and advertisements are based on sophisticated algorithms and opaque criteria.<sup>155</sup> Furthermore, Lambrecht and Tucker's research has shown that undesirable data-based discrimination may be produced when applying algorithms to select advertising receivers based on cost-effectiveness.<sup>156</sup> Consequently, authorities may not identify a defendant company's discriminatory behavior, especially since it is difficult to draw a distinction between intentional discrimination and occasional use of different conditions for similar transactions. This technical incapacity undermines the application of competition law to discriminatory actions.

### 4. Harms to Market Competition

To establish harms to the market, authorities must first define the market. However, this is particularly challenging in the context of digital platforms. High-tech industries are developing in unexpected ways. Consequently, our common understanding of market boundaries

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155. DOTECON LTD., *supra* note 128, at 103.

156. See Anja Lambrecht & Catherine Tucker, *Algorithmic Bias? A Study of Data-based Discrimination in the Serving of Ads in Social Media*, (2016) [https://www.ftc.gov/system/files/documents/public\\_events/966823/lambrecht\\_tucker\\_algorithmicbias\\_final.pdf](https://www.ftc.gov/system/files/documents/public_events/966823/lambrecht_tucker_algorithmicbias_final.pdf).

is not fully applicable to these companies. Despite this, some similarities may be noted. For example, a particular digital service may have unique functions and yet share common core features with other digital services. Take Facebook and Quora as examples: they are both online networking platforms, even though the platforms target different users. Facebook targets general users, and Quora targets knowledge-sharing users. Determining whether Facebook and Quora are interchangeable and therefore in the same relevant market can be daunting. The data on multi-homing is helpful. Multi-homing means users employ several online networking platforms at the same time. But collecting the data and identifying user identity is not simple because most users may not use their real names.

Even if a relevant market can be identified by regulatory agencies, establishing competition harms remains a significant challenge. For example, Hotel.com combines the data on hotels (demand, availability, pricing, popularity, etc.) with user-related information to provide relevant accommodation and tourism recommendations to travelers. The site thus combines functions of several traditional markets—advertising, tourism, travel agency, etc. Consequently, one must decide whether an online hotel booking platform constitutes a new market or a collection of different markets when identifying market harms.

### *C. The Way Forward*

While competition law has been effective in addressing violations in traditional industries, this Article has highlighted that our existing approaches are not suitable for behavioral discrimination on digital platforms. Several recommendations are advanced to overcome these limitations. First, it may be necessary to reconsider the scope of competition law. Ultimately, decision-makers must identify the degree to which individual buyers should be protected under the competition law regime. This will depend on the prevailing values in a particular jurisdiction. Second, regulatory agencies need to determine the appropriate standard of proof in behavioral discrimination cases. Legislators and courts can make meaningful contributions in this area. For example, courts, particularly in common law jurisdictions, can overturn established cases and develop new legal principles. For example, courts can consider whether it is desirable to reverse the burden of proof in inquiries concerning dominant position, equivalent transactions,

discriminatory behavior, and harms to competition. Among other measures, courts can adopt a rebuttable presumption that competition harm is present if the relevant authorities can show a dominant position and discriminatory practices.

Although court-led change is promising, it is not likely that change can come within a short period of time. “Evolution by a common law-like process” is time-consuming,<sup>157</sup> and judges may not have sufficient knowledge to develop regulatory frameworks for complex and rapidly changing technology issues.

Third, lawmakers can contribute to this process by developing new competition law tools. Indeed, the US Robinson-Patman Act was enacted with a specific goal—the protection of small and medium-sized businesses. However, legislative amendments present several challenges. New legislation may not be “enacted by experts committed to sound, economically-focused antitrust” legislation.<sup>158</sup> Furthermore, unrelated political considerations may impede the development of effective regulatory systems. Equally important, competition law needs broader statutory provisions so that it can “evolve in response to new learning.”<sup>159</sup> Thus, it may not be enough to simply amend existing rules to capture data-driven industries. It is also essential to consider whether effective investigative tools are available to detect and deter unwanted behavior. New regulatory frameworks, therefore, must be accompanied by appropriate investigation and enforcement mechanisms.

Fourth, beyond competition law, governments may consider applying other relevant legislative tools to behavioral discrimination. Although consumer protection laws appear to be an obvious choice, these rules may not be effective in responding to behavioral discrimination. For example, the EU Directive 2005/29/EC on unfair commercial practices requires a business to disclose important information to ensure that consumers can make informed purchases. But the Directive does not prohibit behavioral discrimination. More importantly, behavioral discrimination covers broader harms than consumer protection. As a result, consumer protection laws should be viewed as a

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157. STIGLER COMM. ON DIGIT. PLATFORMS., *supra* note 14, at 92.

158. *Id.* at 93.

159. *Id.*

supplementary mechanism and not the main line of defense against the harms associated with behavioral discrimination.

Additionally, it is important to recognize that data protection laws may not comprehensively resolve behavioral discrimination problems. For example, Article 22(1) of the General Data Protection Regulation stipulates that “data subjects shall have the right not to be subject to a decision based solely on automated processing . . . which produces legal effects concerning him or her or similarly significantly affects him or her.”<sup>160</sup> Accordingly, a seller cannot use a buyer’s data without the buyer’s explicit consent.<sup>161</sup> In practice, to enjoy online sellers’ services, the vast majority of buyers tend to unwittingly consent to sellers’ data policies. Without clearer restrictions, data protection laws cannot effectively address the abovementioned anticompetition concerns.

Lawmakers can consider enacting new rules apart from competition rules to control the digital services market. Indeed, the EU has put forward a legislative proposal, the “Digital Market Act,” to regulate digital services.<sup>162</sup> The Act aims to “address unfair practices by gatekeepers that either fall outside existing EU competition rules or that cannot be effectively addressed by these rules.”<sup>163</sup> The proposal uses comparatively broad terms to list behaviors regulated under the Act. Additionally, it provides the relevant authorities with investigative and enforcement tools.<sup>164</sup> This approach is beneficial because (1) it responds promptly to the digital-services-related problems, and (2) it does not unduly restrict the development of competition law.

Also noteworthy are the developments in the UK. A new governmental sector, Digital Market Unit, was established within the Competition and Market Authority to “introduce and enforce a new code to govern the behaviour of platforms that currently dominate the market,

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160. *Note by the European Union, supra* note 4, at 11.

161. *Id.* at 11–12.

162. *Regulation of the European Parliament and of the Council on Contestable and Fair Markets in the Digital Sector (Digital Markets Act)*, at 1–3, COM (2020) 437 Final (Dec. 15, 2020).

163. *Id.* at 3.

164. *Id.* at chs. I, IV, V.

such as Google and Facebook.”<sup>165</sup> The new code imposes stricter transparency requirements on digital platforms and its advertisers, including by providing information on “how they are using consumers’ data, giv[ing] consumers a choice over whether to receive personalized advertising, and [being] prevented from placing restrictions on their consumers that make it hard for them to use rival platforms.”<sup>166</sup> Moreover, the new unit was given stronger powers to “suspend, block and reverse decisions of tech giants, order them to make certain actions to achieve compliance with the code, and impose financial penalties for non-compliance.”<sup>167</sup> This new development in the UK is worth referencing since it provides regulators with more effective and flexible tools beyond what is available under competition law.

## VI. CONCLUSION

By relying on big data analytics, digital platforms and online sellers can identify consumers’ preferences and desires. This knowledge allows them to develop personalized services and is known as behavioral discrimination. Several approaches to behavioral discrimination are used in setting up personalized services including decoys, personalized pricing, increasing complexity, imperfect will-power, and behavioral biases.

Behavioral discrimination can be welfare-enhancing, such as by setting more reasonable prices for products based on a mutually acceptable allocation of risks. It also lowers search costs. Despite these advantages, behavioral discrimination raises several concerns including unfair wealth transfer, inefficient output allocation, overproduction, and privacy concerns. Additionally, behavioral discrimination may harm market competition by breaking the competitive balance in horizontal markets and even vertical markets.

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165. Press Release, Dep’t for Bus., Energy, & Indus. Strategy, New Competition Regime for Tech Giant to Give Consumers more Choice and Control Over Their Data, and Ensure Businesses are Fairly Treated (Nov. 27, 2020), <https://www.gov.uk/government/news/new-competition-regime-for-tech-giants-to-give-consumers-more-choice-and-control-over-their-data-and-ensure-businesses-are-fairly-treated>.

166. *Id.*

167. *Id.*

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Most jurisdictions employ a patchwork of different regulatory tools in regulating behavioral discrimination without directly responding to this technology. After conducting a comparative survey of the EU, US, Japan, and Singapore's competition law regimes, the Article concludes that these competition law frameworks are mostly ineffective in addressing the concerns associated with behavioral discrimination.

First, the Article finds that exploitative discrimination is not addressed in most competition law regimes. Consequently, there is an urgent need to consider whether the present hands-off approach is appropriate in the world dominated by digital commerce. Second, competition law creates enforcement barriers. Proving the required elements in a traditional competition law inquiry is challenging and this challenge is further complicated by the unique nature of the digital market. Third, authorities have few incentives to rely on competition law in behavioral discrimination cases because buyers generally do not know whether they are abused through behavioral discrimination.

In the end, discriminatory behavior may be better remedied through a combination of ex-ante and ex-post tools and by establishing a new sector-specific regulatory bodies to oversee digital markets. Examples of promising legislation include the EU Digital Market Act and the Digital Service Act. Consumer and data protection laws can provide an additional layer of protection against behavioral discrimination, though the scope of these laws is likely to be limited. Establishing a new governmental sector to regulate leading digital platforms is also helpful in addressing behavioral discrimination problems.